

COMPUTER-AIDED NUCLEIC ACID SEQUENCING

ABSTRACT OF THE DISCLOSURE

5 A computer system for sequencing nucleic acids is provided. The computer
system may be used for de novo sequencing of a nucleic acid sequence by analyzing
the fluorescence intensities of hybridized nucleic acid probes on biological chips. The
probes with the highest intensities are utilized to sequence the nucleic acid and related
probes are analyzed to increase the accuracy of nucleic acid sequencing. The
sequence of the nucleic acid sequence may be determined from hybridization
10 intensities that do not allow identification of perfectly complementary probes.